

## AMENDMENT

## IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) Surface-modified pyrogenically produced zinc oxide powder, comprising characterized in that they are aggregates and have having the following physico-chemical characteristic data:

BET surface areas:  $18 \pm 5 \text{ m}^2/\text{g}$

C content: 0.5 to 1.0 wt.%,

wherein the surface modification includes silanization ~~and the resultant modified surface is hydrophobic.~~ with a surface modifying agent selected from the group consisting of:

a) Organosilanes of the type  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$  and  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n-1})$

$\text{R} = \text{alkyl, such as, methyl-, ethyl-, n-propyl-, i-propyl-, butyl-}$   
 $n = 1 - 20$

b) Organosilanes of the type  $\text{R}'_x(\text{RO})_y\text{Si}(\text{C}_n\text{H}_{2n+1})$  and  $\text{R}'_x(\text{RO})_y\text{Si}(\text{C}_n\text{H}_{2n-1})$

$\text{R} = \text{alkyl, such as, methyl-, ethyl-, n-propyl-, i-propyl-, butyl-}$

$\text{R}' = \text{alkyl, such as, methyl-, ethyl-, n-propyl-, i-propyl-, butyl-}$

$\text{R}' = \text{cycloalkyl}$

$n = 1 - 20$

$x+y = 3$

$x = 1, 2$

$y = 1, 2$

c) Halogeno-organosilanes of the type  $\text{X}_3\text{Si}(\text{C}_n\text{H}_{2n+1})$  and  $\text{X}_3\text{Si}(\text{C}_n\text{H}_{2n-1})$

$\text{X} = \text{Cl, Br}$

$n = 1 - 20$

d) Halogeno-organosilanes of the type  $\text{X}_2(\text{R}')\text{Si}(\text{C}_n\text{H}_{2n+1})$  and  $\text{X}_2(\text{R}')\text{Si}(\text{C}_n\text{H}_{2n-1})$

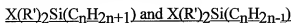
$\text{X} = \text{Cl, Br}$

$\text{R}' = \text{alkyl, such as, methyl-, ethyl-, n-propyl-, i-propyl-, butyl-}$

$\text{R}' = \text{cycloalkyl}$

$n = 1 - 20$

## e) Halogeno-organosilanes of the type



$\text{X} = \text{Cl, Br}$

$\text{R}' = \text{alkyl, such as, methyl-, ethyl-, n-propyl-, i-propyl-, butyl-}$

$\text{R}' = \text{cycloalkyl}$

$n = 1 - 20$

f) Organosilanes of the type  $(\text{RO})_3\text{Si}(\text{CH}_2)_m\text{-R}'$ 

$\text{R} = \text{alkyl, such as methyl-, ethyl-, propyl-}$

$m = 0, 1 - 20$

$\text{R}' = \text{methyl-, aryl (-C}_6\text{H}_5\text{, substituted phenyl radicals)}$

$\text{-C}_4\text{F}_9\text{, -OCF}_2\text{-CHF-CF}_3\text{, -C}_6\text{F}_{13}\text{, -O-CF}_2\text{-CHF}_2$

$\text{-NH}_2\text{, -N}_3\text{, -SCN, -CH=CH}_2\text{, -NH-CH}_2\text{-CH}_2\text{-NH}_2\text{,}$

$\text{-N-(CH}_2\text{-CH}_2\text{-NH}_2)_2$

$\text{-OOC(CH}_3\text{)C=CH}_2$

$\text{-OCH}_2\text{-CH(O)CH}_2$

$\text{-NH-CO-N-CO-(CH}_2\text{)}_5$

$\text{-NH-COO-CH}_3\text{, -NH-COO-CH}_2\text{-CH}_3\text{, -NH-(CH}_2\text{)}_3\text{Si(OR)}_3$

$\text{-S}_x\text{-(CH}_2\text{)}_3\text{Si(OR)}_3$

$\text{-SH}$

$\text{-NR'R''R'''} \text{ (R' = alkyl, aryl; R'' = H,}$

$\text{alkyl, aryl; R''' = H, alkyl, aryl, benzyl,}$

$\text{C}_2\text{H}_4\text{NR'''' R'''' where R'''' = H, alkyl and}$

$\text{R'''' = H, alkyl)}$

g) Organosilanes of the type  $(\text{R''})_x(\text{RO})_y\text{Si(CH}_2\text{)}_m\text{-R}'$ 

$\text{R''} = \text{alkyl} \quad x+y = 2$

$\text{ } = \text{cycloalkyl} \quad x = 1, 2$

$y = 1, 2$

$m = 0, 1 \text{ to } 20$

$\text{R}' = \text{methyl-, aryl (-C}_6\text{H}_5\text{, substituted phenyl radicals)}$

$\text{-C}_4\text{F}_9\text{, -OCF}_2\text{-CHF-CF}_3\text{, -C}_6\text{F}_{13}\text{, -O-CF}_2\text{-CHF}_2$

$\text{-NH}_2\text{, -N}_3\text{, -SCN, -CH=CH}_2\text{, -NH-CH}_2\text{-CH}_2\text{-NH}_2\text{,}$

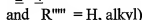
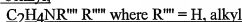
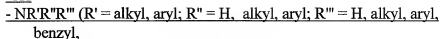
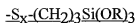
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$\text{-OOC(CH}_3\text{)C=CH}_2$

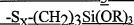
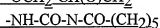
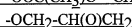
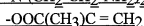
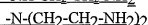
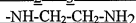
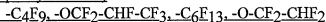
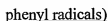
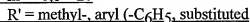
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$\text{-NH-CO-N-CO-(CH}_2\text{)}_5$

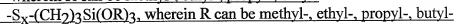
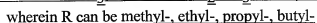
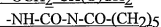
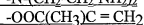
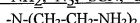
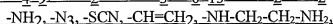
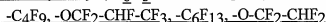
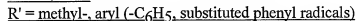
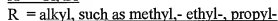
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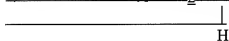
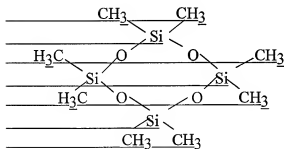


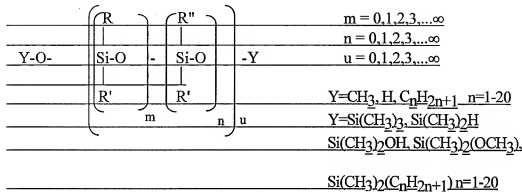
h) Halogeno-organosilanes of the type  $\text{X}_3\text{Si(CH}_2\text{)}_m\text{-R'}$



i) Halogeno-organosilanes of the type  $(\text{R})\text{X}_2\text{Si(CH}_2\text{)}_m\text{-R'}$



i) Halogeno-organosilanes of the type  $(R)_2X Si(CH_2)_m - R'$  $X = Cl, Br$  $R = \text{alkyl}$  $m = 0, 1 - 20$  $R' = \text{methyl-, aryl (-C}_6\text{H}_5\text{, substituted phenyl radicals)}$  $-\text{C}_4\text{F}_9, -\text{OCF}_2-\text{CHF}-\text{CF}_3, -\text{C}_6\text{F}_{13}, -\text{O}-\text{CF}_2-\text{CHF}_2$  $-\text{NH}_2, -\text{N}_3, -\text{SCN}, -\text{CH}=\text{CH}_2, -\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}_2$  $-\text{N}(\text{CH}_2-\text{CH}_2-\text{NH}_2)_2$  $-\text{OOC}(\text{CH}_3)\text{C}=\text{CH}_2$  $-\text{OCH}_2-\text{CH}(\text{O})\text{CH}_2$  $-\text{NH}-\text{CO}-\text{N}-\text{CO}-(\text{CH}_2)_5$  $-\text{NH}-\text{COO}-\text{CH}_3, -\text{NH}-\text{COO}-\text{CH}_2-\text{CH}_3, -\text{NH}-$  $(\text{CH}_2)_3\text{Si}(\text{OR})_3$  $-\text{S}_x-(\text{CH}_2)_3\text{Si}(\text{OR})_3$  $-\text{SH}$ k) Silazanes of the type  $R'R_2Si-N-SiR_2R'$  $R = \text{alkyl, vinyl, aryl}$  $R' = \text{alkyl, vinyl, aryl}$ l) Cyclic polysiloxanes of the type D 3, D 4, D 5, wherein D 3, D 4 and D 5 are understood as cyclic polysiloxanes with 3, 4 or 5 units of the type  $-\text{O}-\text{Si}(\text{CH}_3)_2-$ . E.g. octamethylcyclotetrasiloxane = D 4

m) Polysiloxanes or silicone oils of the type

R = alkyl, such as  $\text{C}_n\text{H}_{2n+1}$ , wherein  $n = 1$  to  $20$ , aryl,  
 such as phenyl and substituted phenyl radicals,  
 $(\text{CH}_2)_n\text{-NH}_2\text{-H}$

R' = alkyl, such as  $\text{C}_n\text{H}_{2n+1}$ , wherein  $n = 1$  to  $20$ , aryl,  
 such as phenyl- and substituted phenyl radicals,  
 $(\text{CH}_2)_n\text{-NH}_2\text{-H}$

R' = alkyl, such as  $\text{C}_n\text{H}_{2n+1}$ , wherein  $n = 1$  to  $20$ , aryl,  
 such as phenyl- and substituted phenyl radicals,  
 $(\text{CH}_2)_n\text{-NH}_2\text{-H}$

R' = alkyl, such as  $\text{C}_n\text{H}_{2n+1}$ , wherein  $n = 1$  to  $20$ , aryl,  
 such as phenyl and substituted phenyl radicals,  
 $(\text{CH}_2)_n\text{-NH}_2\text{-H}$

2. (Cancelled)

3. (Currently amended) A process for the preparation of the surface-modified pyrogenically produced zinc oxide powder according to Claim 1, comprising optionally spraying a zinc oxide with water, spraying [a] the surface-modifying agent at room temperature to obtain a zinc oxide sprayed with said surface-modifying agent, heat treating said zinc oxide at a temperature of 50 to 400°C over a period of 1 to 6 hours to thereby obtain a surface-modified zinc oxide.

4. (Cancelled)

5. (Currently amended) A process for the preparation of the surface-modified pyrogenically produced zinc oxide powder according to Claim 1, comprising optionally spraying zinc oxide with water, treating said zinc oxide with ~~[[a]]~~ the surface-modifying agent in vapour form and then heat-treating the resulting zinc oxide at a temperature of 50 to 800°C over a period of 0.5 to 6 hours to thereby obtain a surface-modified zinc oxide.

6. (Cancelled)

7. (Previously presented) A cosmetic preparation comprising a dermatologically acceptable carrier and the surface-modified pyrogenically produced zinc oxide powder of Claim 1.

8. (Cancelled)

9. (Previously presented) A sunscreen preparation comprising a dermatologically acceptable carrier and the surface modified pyrogenically produced zinc oxide powder of Claim 1.

10. (Cancelled)

11. (Previously presented) The sunscreen preparation according to Claim 9, wherein the dermatologically acceptable carrier is a member selected from the group consisting of octocrylene, ethylhexyl methoxycinnamate, phenylbenzimidazole sulfonic acid, and bis-ethylhexyloxy methoxyphenyl triazine.

12. (Currently amended) The surface-modified pyrogenically produced zinc oxide powder according to Claim 1, ~~made from a zinc oxide which is a pyrogenically-produced zinc oxide powder having a BET surface area of 10 to 100 m<sup>2</sup>/g in the form of~~ wherein the aggregates of anisotropic primary particles ~~wherein the aggregates~~ have an average diameter of 50 to 300 nm.

13. (Previously presented) The surface-modified pyrogenically produced zinc oxide powder according to Claim 12 wherein the aggregates have a shape factor F (circle) of below 0.5.

14. (Previously presented) The surface-modified pyrogenically produced zinc oxide powder according to Claim 12 wherein the zinc oxide powder displays at its surface an oxygen

concentration as non-desorbable moisture in the form of  $\text{Zn-OH}$  and/or  $\text{Zn-OH}_2$  units of at least 40%.